

## ABSTRACT

A method of stir welding T-joints comprises assembling and stir welding first and second members. The first member comprises a sheet portion of material and also comprises  
5 restraining surfaces. The second member comprises a rib. The rib is stir welded to the sheet portion with the edge margin of the rib being positioned between the restraining surfaces of the first member. During stir welding, the restraining surfaces of the first member limit movement of the rib  
10 relative to the first member. A tooling portion is preferably formed as a contiguous portion of the material of one of the first and second members. The first and second members are secured to a stir welding apparatus via the tooling portion during the stir welding. The method yet further comprises a  
15 step of separating the tooling portion from the first and second members after forming the stir welded T-joint.